

R E M A R K S

Claims 1-3, 8-9 12-17, and 19 were rejected under 35 USC 102 as being anticipated by Elwalid et al, US Patent 6,353,616. Applicants respectfully traverse.

The Examiner asserts that Elwalid et al disclose the claimed subject matter, but in connection with the last clause of the claim 1, for example, (prior to its current amendment) the claim specifies “processing the queued messages in a predetermined sequence such that each message type is allotted a predetermined amount of processing time” (emphasis supplied). What this means is that although the different queues have different weights, and that means that the different queues should get different amounts of processing time, the claim specifies that the sequencing is such that the queues are allotted “a” – singular – “predetermined amount of processing power” – in contrast to allotting each queue it own different – perhaps different – predetermined amount of processing power. The Examiner has apparently to notice this distinction, stating merely that the reference teaches that step 302 allocates processing capacity in messages classes for each queue. That, of course, is different from what claim 1 specifies and, therefore, it is respectfully submitted that claim 1 is not anticipated by the reference. Similar arguments apply to at least a number of the other independent claims (prior to their current amendment).

Nevertheless, in order to make the claims clearer, all of the independent claims and a number of the dependent claims are amended herein and, as amended, it is believed that the claims are neither anticipated nor are obvious in view of the cited reference.

Basically, the Elwalid et al reference teaches an arrangement that has a plurality of queues into which messages of different types are stored. A processor then processes the messages in the queues in a specific manner that has the goal of utilizing the network most efficiently. To that end, the weights that are assigned to the queues are dependent on link utilization factors, and much of the Elwalid et al description is devoted to the teaching of weight factor determinations. The processing is by means of a round robin arrangement that simply includes each of the queues once.

There is no notion in Elwalid of processing a queue in accord with a simple algorithm of a certain amount of time that is allotted to the queue (provided there are messages that occupy this certain amount of time), and there is certainly no notion of

obtaining the necessary amount of processing power for a queue (based on the queue's weight factor) by revisiting a queue more than once in a sequence of visits.

In contradistinction, amended claim 1 specifies a step of:

assigning a weight to each of the respective message queues based on urgency considerations for processing said control message

This clause highlights the fact that the weighting of the queues is not based on link utilization considerations – as in the Elwalid et al reference – but on urgency to process considerations, thereby allowing the system to avoid erroneously declaring an available link as unavailable. This clause clearly makes amended claim 1 patentable over the Elwalid et al reference.

Claim 1 further specifies a step of “developing a sequence of said queues based on said weights.” The sequence of accessing the queues in Elwalid et al is not based on the weights of the queues. See FIG. 3 of Elwalid et al, where it is shown that the queues are processed in the ordinal manner (first, then second, then third). Therefore, this clause also makes claim 1 patentable over the Elwalid et al reference.

Claim 1 still further specifies the step of:

accessing said queues in accord with said sequence, and processing the control messages queued in the accessed queue for at most a processing time of T seconds, where T is preselected.

This clause is similar to the last clause in the unamended claim 1, although in this amended form the thrust of the clause is clearer; that is, each time a queue is accessed, it is given processing power to handle the messages in the queue, up to processing interval T. T is the upper bound but, of course, the processing time can be smaller, such as when the number of messages in the queue is small. Clearly, this clause defines subject matter that is not described or suggested by the cited reference and, therefore, this clause also makes claim 1 patentable over the Elwalid et al reference.

Claim 2 depends on claim 1, specifying that the developed sequence is a round robin table where number of appearances of the queues is a function of the weights assigned to said queues. The notion of number of items in the round robin table being anything other than the number of distinct queues is completely absent from the Elwalid et al reference and, therefore, it is respectfully submitted that claim 2 is neither anticipated nor is obvious in view of the Elwalid et al reference.

Claim 3 adds specificity to the definition of claim 2, and since the subject matter of claim 2 is not found in, or suggested by, the reference, not surprisingly, applicants respectfully submit that claim 3 is also neither anticipated nor is obvious in view of the Elwalid et al reference.

Claim 8, which defines that the queue weights are independent of trunk utilization, defines precisely away from the teachings of Elwalid et al, where weights are assigned based on link (e.g., trunk) utilization. Therefore, it is respectfully submitted that claim 8 is neither anticipated nor is obvious in view of Elwalid et al.

Independent claim 9 contains a number of limitations that each renders the claim patentable over Elwalid et al. First, claim 9 defines the set of control messages to include both messages received by the node, and messages generated by the node. Second, claim 9 specifies assigning a weight to each queue “in a manner adapted to reduce likelihood of declaring that an available trunk is unavailable.” As indicated above, the specification of weights in the Elwalid et al reference does not so define the weights. Third, claim 9 specifies generating a round robin polling table with the number of entries corresponding to the sum of the weights that are assigned to the queues. The Elwalid et al reference does not have such number of entries in the round robin table. Fourth, like claim 1, claim 9 specifies that “a predetermined amount of processing power is allotted to each of the message queues.” See the discussion regarding claim 1 prior to its amendment.

In view of these reasons, each of which being sufficient for patentability, it is respectfully submitted that claim 9 is neither anticipated nor is obvious in view of Elwalid et al.

Amended claim 12 specifies a network with nodes, where each node includes a node processor that (1) identifies predetermined types of link state routing control messages, (2) stores each type of identified message in a respective weighted queue, (3) processes the routing control messages by accessing the queues, one at a time, in a predetermined sequence, (4) the sequence is based on the weighting of said queues, and (5) the processor is limited to provide not more than a predetermined amount of processing power with each access of a queue. At least limitations 4 and 5 are not described or suggested by Elwalid et al. Therefore, it is respectfully submitted that claim 12 is neither anticipated nor is made obvious by Elwalid et al.

Claim 13 is dependent on claim 12.

Claim 14, which specifies that the number of entries in the round robin sequence corresponds to the **sum of the weights**, specifies subject matter that is neither described nor suggested by Elwalid et al.

Claim 15 has a limitation not unlike the one in claim 12 and, therefore, the above argument relative to claim 12 is applicable to claim 15.

Claim 16 is dependent on claim 15.

Claim 17 has a limitation not unlike the one in claim 14 and, therefore, the above argument relative to claim 14 is applicable to claim 17.

Claim 19 is dependent on claim 15.

Claims 5, 6, 10, 18, and 20 were rejected under 35 USC 103 as being unpatentable over Elwalid et al. These claims depend on claims that are patentable and, therefore, it is respectfully submitted that they, too, are patentable.

In view of the above amendments and remarks, applicants respectfully submit that all of the Examiner's rejections have been overcome. Reconsideration and allowance are respectfully solicited.

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